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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,169	10/13/2003	Martin Kolb	6570P003	4258
45962 7590 04/24/2008				
SAP/BLAKELY				
1279 OAKMEAD PARKWAY				
SUNNYVALE, CA 94085-4040				
EXAMINER				
MEHRMANESH, ELMIRA				
ART UNIT		PAPER NUMBER		
2113				
MAIL DATE		DELIVERY MODE		
04/24/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/685,169

Applicant(s)

KOLB ET AL.

Examiner

Elmira Mehrmanesh

Art Unit

2113

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-34, 36-43, 45-52 and 54-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-34, 36-43, 45-52 and 54-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsman's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This action is in response to a RCE February 26, 2008 for the application of KOLB et al., for a "SYSTEM AND METHOD FOR TESTING APPLICATIONS AT THE BUSINESS LAYER" filed October 13, 2003.

Claims 28-34, 36-43, 45-52 and 54-57 are pending in the application.

Claims 28-34, 36-43, 45-52 and 54 are amended.

Claims 55-57 are added.

Claims 1-27, 35, 44, 53 are cancelled.

Claims 28-34, 36-43, 45-52 and 54-57 are rejected under 35 USC § 103.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 28-34, 36-43, 45-52 and 54-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over McMahon et al. (U.S. Patent No. 5,758,062) in view of Cheng et al. (U.S. PGPub No. 20040268306).

As per claim 28, McMahon discloses a method for testing a multi-tier application having a presentation layer, a business layer, and a third layer for storing information associated with the multi-tier application (Fig. 2A), wherein the method comprises:

 sending known test inputs to a first instance of the multi-tier application
 receiving output from the first instance of the multi-tier application responsive to the known test inputs (Fig. 3)

 establishing predicted output for the multi-tier application based on the converted output (col. 7, lines 15-35)

 generating a test script for the multi-tier application by associating the predicted output with the known test inputs, wherein the test script is to send the known test inputs to the business layer of a second instance of the multi-tier application, bypassing the presentation layer (col. 7, lines 40-44), and compare results from the second instance of the multi-tier application with the predicted output (col. 7, lines 37-57)

McMahon discloses of standard ASCII text file format (col. 19, lines 55-60). However McMahon fails to explicitly disclose geographic-neutral and linguistic-neutral format.

Cheng teaches:

converting the output into a geographic-neutral and linguistic-neutral format (page 8, paragraph [0080] through [0093]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the method of application testing of McMahon et al. in combination with the data display system of Cheng to effectively test software.

One of ordinary skill in the art at the time of the invention would have been motivated to make the combination because McMahon discloses of a recording data in a highly structured format that can readily be searched and compared using sophisticated searching procedures (col. 20, lines 32-45). McMahon further discloses of the standard ASCII text file format, providing portable, readable, and editable files (col. 19, lines 55-60) for more efficient testing (col. 2, lines 45-52). Cheng discloses of using a language independent binary format for efficient testing (page 6, paragraph [0068]).

As per claim 29, Cheng discloses converting the known test inputs into the geographic-neutral and linguistic-neutral format; and storing the converted known test inputs and the converted output in an application independent format (page 8, paragraph [0080] through [0093]).

As per claim 30, Cheng discloses storing the converted known test inputs and the converted output in the application independent format comprises: storing the converted known test inputs and the converted output in the geographic-neutral and

linguistic-neutral format based on a predefined Extensible Markup Language ("XML") schema (page 8, paragraph [0080] through [0093]).

As per claim 31, McMahon discloses sending the known test inputs to the presentation layer of the second instance of the multi-tier application, the presentation layer preparing the known test inputs according to predefined presentation logic and generating presentation layer output responsive to the known test inputs provided (col. 6, lines 37-45); and comparing the presentation layer output with the predicted output from the first instance of the multi-tier application (col. 7, lines 37-57)

Cheng discloses sending inputs in the geographic-neutral and linguistic-neutral format (page 8, paragraph [0080] through [0093]).

As per claim 32, McMahon discloses storing the plurality known test inputs and the associated predicted output within a test library, wherein the test library is accessible via a test script, the test script used to test the second and subsequent instance of the multi-tier application (col. 23, lines 55-67).

As per claim 33, McMahon discloses the second instance of the multi-tier application comprises an application under test, wherein the application under test is used to generate the results for comparison with the predicted output from the first instance of the multi-tier application (Fig. 9, element 360).

As per claim 34, McMahon discloses the test script is to send the known test inputs to the business layer of the second instance of the multi-tier application, bypassing the presentation layer (col. 7, lines 40-44), comprises: sending the known test inputs via a Hyper Text Transport Protocol ("HTTP") request (col. 9, lines 1-7), wherein the HTTP request is received at the business layer of the second instance of the multi-tier application without engaging logic at the presentation layer of the second instance of the multi-tier application (col. 6, lines 51-57).

As per claim 36, McMahon discloses specifying via the HTTP request, a network location accessible to the second instance of the multi-tier application to store the results generated in response to the known test inputs sent to the second instance of the multi-tier application (col. 9, lines 1-7) and (col. 6, lines 51-57).

As per claim 37, McMahon discloses a test control system for testing a multi-tier application having a presentation layer, a business layer, and a third layer for storing information associated with the multi-tier application (Fig. 2A), wherein the system comprises:

means for sending known test inputs to a first instance of the multi-tier application; means for receiving output from the first instance of the multi-tier application responsive to the known test inputs (Fig. 3)

means for establishing predicted output for the multi-tier application based on the converted output (col. 7, lines 15-35); and

means for generating a test script for the multi-tier application by associating the predicted output with the known test inputs, wherein the test script comprises means for sending the known test inputs to the business layer of a second instance of the multi-tier application, bypassing the presentation layer, and comparing results from the second instance of the multi-tier application with the predicted output (col. 7, lines 37-57)

McMahon discloses of standard ASCII text file format (col. 19, lines 55-60). However McMahon fails to explicitly disclose geographic-neutral and linguistic-neutral format.

Cheng teaches:

Means for converting the output into a geographic-neutral and linguistic-neutral format (page 8, paragraph [0080] through [0093]).

As per claim 38, Cheng discloses means for converting the known test inputs into the geographic-neutral and linguistic-neutral format; and means for storing the converted known test inputs and the converted output in an application independent format (page 8, paragraph [0080] through [0093]).

As per claim 39, Cheng discloses storing the converted known test inputs and the converted output in the application independent format comprises: means for storing the converted known test inputs and the converted output in the geographic-neutral and linguistic-neutral format based on a predefined Extensible Markup Language ("XML") schema (page 8, paragraph [0080] through [0093]).

As per claim 40, McMahon discloses means for sending the known test inputs to the presentation layer of the second instance of the multi-tier application, the presentation layer preparing the known test inputs according to predefined presentation logic and generating presentation layer output responsive to the known test inputs provided (col. 6, lines 37-45); and means for comparing the presentation layer output with the predicted output from the first instance of the multi-tier application (col. 7, lines 37-57)

Cheng discloses sending inputs in the geographic-neutral and linguistic-neutral format (page 8, paragraph [0080] through [0093]).

As per claim 41, McMahon discloses means for storing the known test inputs and the associated predicted output within a test library, wherein the test library is accessible via the test script, the test script used to test the second and subsequent instances of the multi-tier application (col. 23, lines 55-67).

As per claim 42, McMahon discloses the second instance of the multi-tier application comprises an application under test, wherein the application under test is used to generate the results for comparison with the predicted output from the first instance of the multi-tier application (Fig. 9, element 360).

As per claim 43, McMahon discloses sending the known test inputs to the business layer of the second instance of the multi-tier application, bypassing the

presentation layer, comprises: means for sending the known test inputs via a Hyper Text Transport Protocol ("HTTP") request (col. 9, lines 1-7), wherein the HTTP request is received at the business layer of the second instance of the multi-tier application without engaging logic at the presentation layer of the second instance of the multi-tier application (col. 6, lines 51-57).

As per claim 45, McMahon discloses means for specifying via the HTTP request, a network location accessible to the second instance of the multi-tier application to store the results generated in response to the known test inputs sent to the second instance of the multi-tier application (col. 9, lines 1-7) and (col. 6, lines 51-57).

As per claim 46, McMahon discloses an article of manufacture having test control instructions stored thereon for testing a multi-tier application comprising a presentation layer, a business layer, and a third layer for storing information associated with the multi-tier application (Fig. 2A), wherein the test control instructions, when executed by a processor, cause the processor to perform operations comprising:

sending known test inputs to a first instance of the multi-tier application; receiving output from the first instance of the multi-tier application responsive to the known test (Fig. 3)

establishing predicted output for the multi-tier application based on the converted output (col. 7, lines 15-35); and

generating a test script for the multi-tier application by associating the predicted output with the known test inputs, wherein the test script is to send the known test inputs to the business layer of a second instance of the multi-tier application, bypassing the presentation layer, and compare results from the second instance of the multi-tier application with the predicted output (col. 7, lines 37-57)

McMahon discloses of standard ASCII text file format (col. 19, lines 55-60). However McMahon fails to explicitly disclose geographic-neutral and linguistic-neutral format.

Cheng teaches:

converting the output into a geographic-neutral and linguistic-neutral format (page 8, paragraph [0080] through [0093]).

As per claim 47, Cheng discloses converting the known test inputs into the geographic-neutral and linguistic-neutral format; and storing the converted known test inputs and the converted output in an application independent format (page 8, paragraph [0080] through [0093]).

As per claim 48, Cheng discloses storing the converted known test inputs and the converted output in the application independent format comprises: storing the converted known test inputs and the converted output in the geographic-neutral and linguistic-neutral format based on a predefined Extensible Markup Language ("XML") schema (page 8, paragraph [0080] through [0093]).

As per claim 49, McMahon discloses the test control instructions cause the processor to perform further operations comprising:

sending the known test inputs to the presentation layer of the second instance of the multi-tier application, the presentation layer preparing the known test inputs according to predefined presentation logic and generating presentation layer output responsive to the known test inputs provided (col. 6, lines 37-45); and comparing the presentation layer output with the predicted output from the first instance of the multi-tier application (col. 7, lines 37-57)

Cheng discloses sending inputs in the geographic-neutral and linguistic-neutral format (page 8, paragraph [0080] through [0093]).

As per claim 50, McMahon discloses the test control instructions cause the processor to perform further operations comprising: storing the known test inputs and the associated predicted output within a test library, wherein the test library is accessible via the test script, the test script used to test the second and subsequent instances of the multi-tier application (col. 23, lines 55-67).

As per claim 51, McMahon discloses the second instance of the multi-tier application comprises an application under test, wherein the application under test is used to generate the results for comparison with the predicted output from the first instance of the multi-tier application (Fig. 9, element 360).

As per claim 52, McMahon discloses the test script is to send the known test inputs to the business layer of the second instance of the multi-tier application, bypassing the presentation layer, comprises: sending the known test inputs via a Hyper Text Transport Protocol ("HTTP") request (col. 9, lines 1-7), wherein the HTTP request is received at the business layer of the second instance of the multi-tier application without engaging logic at the presentation layer of the second instance of the multi-tier application (col. 6, lines 51-57).

As per claim 54, McMahon discloses test control instructions cause the processor to perform further operations comprising: specifying via the HTTP request, a network location accessible to the second instance of the multi-tier application to store the results generated in response to the known test inputs sent to the second instance of the multi-tier application (col. 9, lines 1-7) and (col. 6, lines 51-57).

As per claim 55, McMahon discloses the test script is to compare the results from the second instance of the multi-tier application with the predicted output comprises: comparing the converted results with the predicted output (col. 7, lines 37-57)

Cheng teaches:

converting the results from the second instance of the multi-tier application into a geographic-neutral and linguistic-neutral format (page 8, paragraph [0080] through [0093]).

As per claim 56, McMahon discloses the presentation layer generates code for a web browser connected with the first instance of the multi-tier application; and wherein the web browser provides the known test inputs to the first instance of the multi-tier application via a Uniform Resource Locator ("URL") (col. 9, lines 1-7).

As per claim 57, McMahon discloses the presentation layer of the first instance of the multi-tier application receives the known test inputs and sends the known test inputs to the business layer of the first instance of the multi-tier application (col. 6, lines 37-45).

Response to Arguments

Applicant's arguments with filed February 26, 2008 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elmira Mehrmanesh whose telephone number is (571) 272-5531. The examiner can normally be reached on 9-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W. Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2113

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Robert W. Beausoliel, Jr./

Supervisory Patent Examiner, Art Unit 2113